

USSN 10/055,220

REMARKSRegarding the Amendments

Claim 1 has been amended to incorporate into it the limitations expressed in original claim 4. Claim 4 has been correspondingly deleted and the dependency of claim 5 correspondingly changed.

Claims 17-20 have been added. Support for claims 17 and 19 is found at page 7 lines 3-5 of the specification. Support for claim 18 is found at page 3 lines 19-22 of the specification. Claim 20 is supported by original claim 1 and at page 3, lines 19-22 of the specification.

The case now contains 3 independent claims and 19 total claims. No fee is believed to be required for this amendment.

Regarding the rejection of claims 1-3 and 8-12 under 35 USC §102

Claim 1 has been amended to incorporate into it the limitations of original claim 4. Original claim 4 was indicated as being allowable over the cited reference (US 5,091,436). Claim 1, and all claims depending from it (2, 3, 5-10 and 19) are all now believed to be in condition for allowance.

The rejection of claims 11 and 12 is respectfully traversed. Claim 11 is drawn to a two-part reactive system including an isocyanate component and a polyol component. The isocyanate component contains a polyisocyanate compound and a certain polyfunctional (meth)acrylate compound. The polyol component contains a polyol and a blowing agent. The claim further specifies several other parameters that are not being discussed here.

US 5,091,436 discloses a polyurethane hydrid foam formulation, in which a polyisocyanate and a polyol are reacted in the presence of a blowing agent and a "hydroxyvinyl ester". The "hydroxyvinyl ester" is described at columns 13 and 14 of the patent as the reaction product of an unsaturated acid (which could be acrylic or methacrylic acid if R is H or methyl and m is 0) and an epoxy resin. The "hydroxyvinyl ester" contains two terminal unsaturated ester groups and two hydroxyl groups.

Because the hydroxyvinyl ester of US 5,091,436 contains hydroxyl groups, it will react with an isocyanate compound to form a urethane. For this reason, the reference describes blending the hydroxyvinyl ester into the polyol component, not with the isocyanate component. See, e.g., Example 1 at column 21 line 66 to column 22 line 13,

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where the reference describes blending the hydroxyvinyl ester (Derakane™ 411-45) with the polyols. The presence of the hydroxyl groups on the hydroxyvinyl ester renders it unsuitable for blending with the isocyanate, as it will react prematurely, unless precautions (such as blocking the isocyanate groups) are taken.

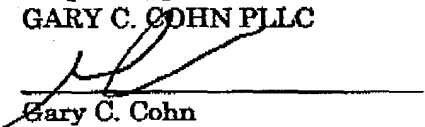
Thus, US 5,091,436 does not disclose any two-component reactive system as described in claim 11, and therefore is not anticipating for claim 11 or any claim depending from claim 11.

Newly added claim 20 is distinguished from US 5,091,426 in requiring that the polyfunctional (meth)acrylate compound be substantially devoid of hydroxyl, primary amine, secondary amine, carboxylic acid and thiol groups. As discussed above, the presence of hydroxyl groups on the hydroxyvinyl ester of the reference renders it unsuitable for blending into an isocyanate component. The polyfunctional (meth)acrylate compound of claim 20 is substantially free of isocyanate-reactive groups and thus can be formulated into the isocyanate component of a two-part reactive system and used as described in claim 20.

Conclusion

A timely notice of allowance is respectfully requested. The undersigned is available by telephone if a call would advance prosecution.

Respectfully submitted,
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